

## CONTEMPORARY CHANGES IN THE CONSTRUCTION OF A NORTHERN AUSTRALIAN FORM OF SPEARTHROWER.

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### ABSTRACT

Contemporary adaptations of traditional items of Australian Aboriginal material culture have been generally neglected as an area worthy of examination in material culture studies. This paper examines the changes that have occurred to the 'gooseneck' speartrower of northern Australia during the middle part of the 20th century. Formerly the 'gooseneck' speartrower was a fragile composite implement. Today, however, many are made as relatively robust weapons carved from a single piece of timber. The 'gooseneck' speartrower appears to be used solely for spear fights within the camp. Contemporary structural modifications displayed in 'gooseneck' speartrowers may reflect changes in the nature of the rules of combat.

**KEYWORDS:** Material culture, technological change, 'gooseneck' speartrower, combat, northern Australia.

### INTRODUCTION

There is, within the life of any particular form of artefact, a series of stages through which it is likely to travel. From the moment of either invention or introduction, change and development in mode of construction or materials used in the manufacture of a particular tool type may occur until, for one reason or another, a society no longer requires that implement and it finally disappears from the suite of material items associated with that society. The time element may be of varying magnitude and causes for change may be either environmentally or culturally derived. For example, the hand axe technologies of Africa, western Asia, India and Europe, spanning hundreds of thousands of years, must surely stand as one of the longest sustained technological traditions in human history. The reasons the hand axe was superseded are lost in time, and it cannot be determined whether the change was internally or externally stimulated.

There are, however, instances when the mechanisms of change are not only documented, but their effects can be measured in terms of time and degree. I refer to the changes that one

society must go through, when impacted upon by another that not only possesses an ethos of imperialism, but also the material wherewithal to sustain that ethos. I refer of course to the interface between pre-industrial and industrial nations generally, and in this instance to the Aboriginal peoples of Australia and the impact of the European invasion.

There have been numerous studies undertaken on the topic of change and adjustment experienced by Aboriginal peoples in the past. Generally these focus on social and economic issues, with material and technological change being only peripherally dealt with, if referred to at all. There are, of course, exceptions to this broad statement. Sharp (1960: 62-73), in a most important paper examined the impact that the introduction of steel axes had on the internal and external social and economic relations of the Yir Yiront of Cape York. Rose's (1965) work among Aboriginals on a central Australian cattle station is also highly significant for providing insights into the material culture of Aboriginals who were maintaining aspects of traditional life, while integrating into the routines controlled or directed by life in the stock and station camps.

I examined the material culture of the Kimberley region during the 1970s from the perspective of change or modification of traditional artefact forms (Akerman 1979). Changes in the nature of some types of sacred objects found in Western Australia were also examined from the perspective of the construction and maintenance of concepts of 'traditional' in Aboriginal philosophy (Akerman 1995: 43-50).

It is apparent that people in many Aboriginal societies today neither make nor use the articles of material culture that were once indispensable to the lives of their forebears. Other Aboriginal groups may manufacture various elements of the original traditional suite of cultural objects either to maintain a visible link with the past, or to service a rapidly growing market for Aboriginal artefacts. Often, implements that are used in everyday life are modified, sometimes quite subtly, in ways that both the people responsible for their production, and the student that studies them, tend to take for granted. Modifications and changes made two or more generations earlier are now often deemed to be part of the 'traditional' schema of life as practised at the time of first European contact.

There appear to be two broad categories of change that an object may undergo. The first I term 'functionally static changes'. These represent structural variations of the original form that do not alter the purpose or function for which the artefact was constructed. The second broad category of change could be termed 'non-functional adaptations'. Such changes may often be observed when an artefact is created solely for the commercial market with no intention that it would ever serve its 'apparent' real function. A spear, for example, made for sale is rarely made with the same attention to the selection of material, or care and craftsmanship as one made specifically for hunting or fighting. These changes can also occur within a quasi-traditional framework, an example being the spearthrower forms found in the Pilbara and Kimberley now used solely for magical purposes with the spur or hook usually missing (McCourt 1975: 56-57). I have been told by elderly Aboriginal informants that, in the past, the lozenge shaped spearthrowers originating in the Pilbara could also be used by 'clever men' to direct and divert storms and cyclones, as well as for sorcery. As missile launchers they were made obsolete by the adoption of firearms, but retained the necessary attributes that allowed

them to serve as vehicles of magic. Non-functional adaptations are evident when comparing cultural objects derived from societies maintaining a traditional or quasi-traditional lifestyle and those cultural objects made for sale and generally available from the plethora of art and craft outlets that have emerged over the past decade or so. The intention of this paper is to detail an example of spearthrower modification that falls into the first, or 'functionally static change', category outlined above.

Spearthrowers, extensively but by no means universally, used by Australian Aboriginals are basically a stick or lath of wood with either an attached spur or hook, or a hook carved in the solid at one end. The spur engages with a concavity in the butt end of the spear and the implement acts as an extension of the arm, increasing the leverage available for propelling the spear. By concentrating virtually all the force of the cast at the base of the spear and directing it along the spear's axis, accuracy can be maintained and the spear projected at a higher velocity than achievable when thrown by the hand alone.

#### THE GOOSENECK SPEARTHROWER, ITS STRUCTURE AND FUNCTION

I discuss in this paper an unusual form of the stick-like class of spearthrowers which Davidson referred to as the 'gooseneck' type (Davidson 1936: 475-478), and Cundy (1989: 116-119) calls the 'goose spearthrower'. I prefer Davidson's term as being descriptive of the implement form whereas 'goose spearthrower' is ambiguous, intimating (incorrectly) that it was used to hunt these birds. Unless otherwise referenced, the observations presented are based on my own field experiences.

Unlike most other spearthrower forms found among Aboriginal Australians, the gooseneck spearthrower is a relatively flimsy implement that is prone to breakage when under stress. The body consists of a thin (1.5-2.0 cm diameter) rod of light wood averaging about 120 cm in length. At the distal end a small mass of either *Triodia*, *Erythrophleum*, or occasionally *Calliris*, resin is moulded into a blunt hook or spur. About 15-20 cm from the proximal, or grip end, an elongate cone-shaped mass of vegetable resin or wax from the hives of native bees, tapering towards the proximal end, encloses the body (Fig. 1A).

At the time of Davidson's study, the manufacture and use of the gooseneck spearthrower was limited to the north-west quadrant of the Northern Territory and the adjacent Ord River valley in the Kimberleys, Western Australia. Spencer (1914: 378, plate XX) records this type of spearthrower in use among the Kakadu (Gagaju) of the Alligator Rivers area and also illustrates a toy version used by small boys. Basedow (1907: 33-35), writing about the peoples of Darwin and adjacent areas, noted that the main function of this spearthrower was "principally for settling minor quarrels between individuals". Basedow also noted that the proximal end of the spearthrower often served as a drill piece when making fire by friction. In the Forrest River region of the east Kimberley and on the lower reaches of the Victoria River, these spearthrowers were made from the same wood (*Thespesia thespesioides*) as firesticks, and were also used as such when necessary.

Spencer (1928: 823) notes that, among the Kakadu, every male possessed one or more examples of this type of spearthrower, as well as the usual lath-type implement used in day to day hunting activities. This multiplicity of spearthrower forms appears to be the case wherever the gooseneck spearthrower was found, adult males possessing at least two distinct spearthrower types. Among the Aboriginals of the Northern Territory coastal areas, from the Cobourg Peninsula to the Daly River, three types of spearthrowers were in general use, a situation that tends to disagree with the general idea of a minimalist Aboriginal approach to material possessions.

A review of the literature suggests that the gooseneck spearthrower was not introduced into the central and west Kimberley until about 1939. Love (1917), describing Worora material culture, makes no mention of either this type of spearthrower or its associated spears. Elderly Worora and Ngarinyin people in the 1970s said that it was introduced at Kunmunya and Munja settlements in the post-World War II period. In the 1970s it was found throughout the Kimberley but is much rarer today, usually being found in the possession of more conservative elderly males. In the Kimberley, the gooseneck spearthrower is generally known as *warimi* or *warimirri* and the spears associated with it are called *nguni* or *malmurr*. In Aboriginal-English and Creole the spears are generally known as 'bullet' spears, an apt name that reflects the velocity with which they can be hurled.

Bullet spears are small, averaging 1.5 metres in length. The shaft is of light reed, usually *Phragmites* or thin bamboo, and the head is a thin, sharpened rod of hardwood. Ideally, a spear of this type should, in the event of a miss, break on contact with the ground, thus preventing possible re-use by the opposition. Similarly, the hardwood tips should be dry and brittle, enhancing the possibility of shattering in a wound. The preferred woods for the head are thin branches of the grey mangrove (*Avicennia marina*), ironwood (*Erythrophleum chlorostachys*) or the so called freshwater mangrove (*Barringtonia acutangula*). These woods are all reputed to cause toxic inflammation of wounds. The head usually comprises a quarter to a third of the total length of the spear. Heads may be simply jammed carefully into the hollow intermodal area of the shaft or be fixed with a collar of resin or fibre lashing. The base of the spear is cut adjacent to a node, the septal area reinforcing an otherwise fragile zone which will be subject to sudden and intense stress. The spur of the spearthrower will itself abut against the septum and push against it as the spear is being launched.

Lengths of fencing wire may replace wooden spearheads. The base of the wire is often wrapped with a piece of rag prior to being inserted in the shaft, and as the thin smooth wire has a tendency to slip out it is usually bound in position with twine.

When preparing to throw a spear, the hollow base of the spear is engaged with the resin spur. The body of the gooseneck spearthrower is clenched with all fingers into the palm of the hand, and the spear shaft held by the ball of the thumb against the knuckles. The light shaft of the spear may be compressed between spur and fingers, thus bowing it markedly. This action may impart and store energy in the shaft, additional to that provided by the hurling action used in launching the spear. Basedow (1907: 35) illustrates a version of this grip, by which the index finger is extended and not employed at all. These methods of holding spear and thrower appear unique in Australia and are apparently only used with this type of spearthrower.

My concern here, however, is with the number of structural variations this spearthrower type has undergone in the recent past. According to information which I have gathered from Aboriginal peoples across the area in which the gooseneck spearthrower is found, most of these modifications and variations have emerged over

the past thirty or forty years. All the variations described below are regarded by their makers or users as *warimi* or *warimirri* and all were made for use with bullet spears in settling camp disputes. None were made for sale. Indeed, they rarely appear in art and craft outlets even when present in numbers within a community. It should be stressed here that no chronological order is imputed in discussing these variations.

### TECHNOLOGICAL CHANGE AND THE GOOSENECK SPEARTHROWER

The first modification dispenses with the wax or resin cone that would normally be placed at the proximal end. This cone is not a grip, but rather a stop against which the hand can be buttressed. To compensate for the loss of this feature, the proximal end of the spearthrower is slightly enlarged and the body then tapers back to the distal end furnished with the resin spur (Fig. 1B).

In the second variation, the resin spur is replaced with one made from wood. This may be attached in either of two ways. The spur can be made along the lines of the those used with the conventional Kimberley - northwestern Northern Territory spearthrowers (Davidson 1936: 472, fig 6c), requiring a Y-shaped section of tough wood, one arm of which is markedly thinner than the other. The thin arm is placed through a hole bored through the distal end of the spearthrower and wet sinew is then used to lash it in place. The base of the Y projects up and forward and it is on this that the spear will be engaged. When the sinew has dried, the spur is further refined and trimmed and the projecting arm that pierces the body is cut flush with the binding. Finally, the whole distal end, apart from the projecting base of the Y, is enclosed in either *Triodia* or *Erythrophleum* resin. The tip of the spur that engages the spear is normally broad and blunt (Fig. 1C).

Alternatively, the spur may consist of a slightly curved piece of wood flattened at one end of the convex side. This flattened area is placed against the body of the implement and directly bound to it (Fig. 1D). This is similar to the Western Desert method of mounting spearthrower spurs as described by Thomson (1964: 415). Unlike the spurs on desert spearthrowers however, those used on gooseneck spearthrowers are not sharply pointed. All spurs are relatively broad and blunt,

a feature that ensures that the reed or bamboo shaft can cup the spur without enclosing it totally. A sharp spur enclosed by the reed shaft and abutting against the septum could pierce the latter or otherwise damage the fragile spear butt. It should be remembered that there are at least five other methods of mounting spearthrower spurs used in Australia. In the Pilbara, Murchison and the south-west of Western Australia, the spur may be fixed to the body of the spearthrower with resin prior to applying the sinew lashing, and resin also is used to cover the lashing. Across Amhem Land and on Groote Eylandt the spur is slotted into a carefully carved notch or fork at the distal end of the implement and then lashed on with resin covering the binding (Hale and Tindale 1925: 98). Roth (1909: 198, Plate LVII, nos. 10-14) provides descriptions of three methods of mounting spearthrower spurs as practised on Cape York, Queensland. Neither Davidson (1936) nor Cundy (1989) discuss spur mounting techniques in their surveys of Australian spearthrowers.

The original form of gooseneck spearthrower and the three variations are probably all equally as common today and comprise about 90% of the sample observed. The fourth and final variation, whilst not common, has been sighted by me in the Kimberley and the adjacent Northern Territory at least a dozen or so times over the past twenty years. Examples said to have been made at Port Keats have been collected as far south as Elliott in central Australia (W. Murgatroyd pers. comm.). This version of the gooseneck faithfully copies the form of the composite original, the whole being carved in the solid from a single piece of wood. The stop and spur are faithfully sculpted, duplicating the resin elements, and the whole implement is structurally much sounder than the forms described above. Occasionally the stop is ring -, rather than cone - shaped (Fig. 1E).

The fact that the latest version of the gooseneck spearthrower is stronger than the earlier models may well reflect breakdowns in the organization of behaviour in conflict situations. The traditional prototype and the resin-spurred variant are fragile pieces of equipment. The caution required in their use may have engendered enough restraint to take some of the edge from passions embroiled in the heat of conflict. Without care, too great a force could cause the resin hooks to fragment, an inbuilt flaw that could force an element of constraint (albeit slight)

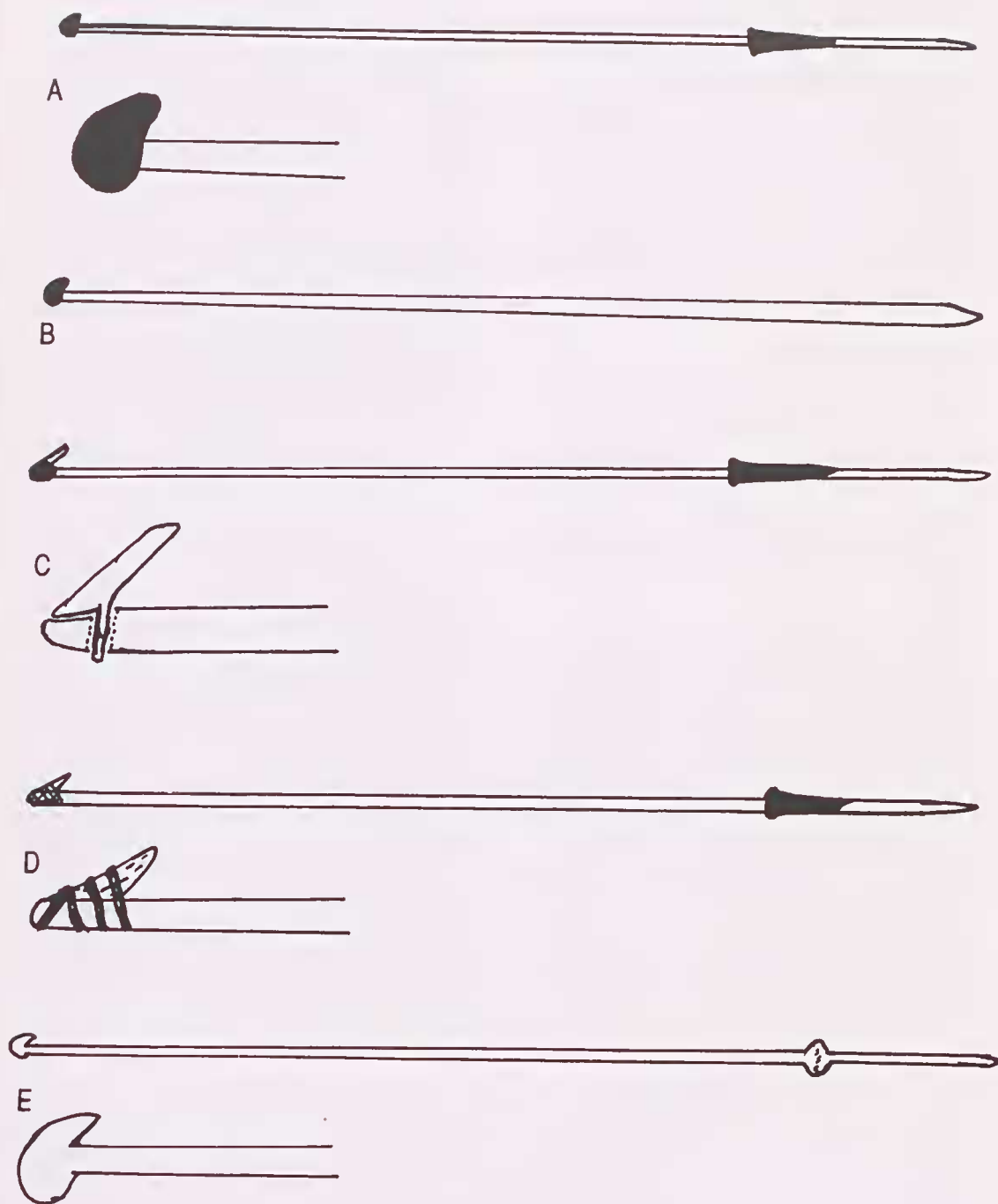


Fig. 1. A, composite gooseneck spearthrower - the original form with hard resin hook or spur (see enlargement) and wax or resin grip-stop. B, modification 1. The resin grip stop has been dispensed with and the proximal end has been expanded. C, modification 2a. The resin spur has been dispensed with and replaced with a wooden spur of the northern or Kimberley form. The sinew lashings and resin that cover the union are omitted in the enlargement in order to illustrate how the junction is effected. D, modification 2b. The resin spur has been dispensed with and replaced with a wooden spur of the desert form. A resin coating over the sinew lashing may be applied at the discretion of the maker or owner (see enlargement). E, modification 3. Gooseneck spearthrower carved in the solid, imitating the composite prototype. The enlargement illustrates how faithfully the form of the spur resembles the original waxen form as shown in A.

into a conflict situation. It is possible that we are seeing, in the original form, a device ostensibly produced as a weapon launcher, but in fact developed to assist in the maintenance and control of 'conflict ritual'. The very fragile, sabre-like, *palati* spearthrower of the north-west Northern Territory possibly served the same function. Spencer (1928: 822) gives the dimensions of a Kakadu *palati* as four feet (122 cm) long by two and five eighths inches (5.7 cm) wide yet only three sixteenths of an inch (47 mm) thick. These spearthrowers were rare and could only be used by the most skilful and experienced men (Spencer 1928: 823; Basedow 1907: 35).

The modified types of gooseneck spearthrowers with attached wooden spurs and a solid form now permit spears to be thrown with greater force without suffering structural failure. As spear fights (at least those that I have witnessed) tend to erupt abruptly (with minimal ritualization) as a verbal dispute escalates, the caution inherent with the use of the fragile composite spearthrower need no longer be exercised.

It should be stressed that the traditional lath-type spearthrowers of the Kimberley are no longer made and used for hunting and fighting. Those that are made are generally produced for the art and craft market, although some may be injected into the indigenous exchange systems that continue to operate today. Older, more conservative men may make and store a gooseneck spearthrower and a bundle of bullet spears in their homes, on the off-chance they may be required in the event of conflict.

Although the changes that the gooseneck spearthrower has undergone are interesting in their own right; a far more intriguing question is, why have these changes occurred?

## CONCLUDING REMARKS

The original form of the gooseneck spearthrower is unique in its structure and specific in its function. The modified forms exhibit a varying combination of the structural features associated with both the original form, and also of other spearthrower types found in the region. The function of the modified forms remains the same as that of the original - to launch spears in conflict situations. There has been no substitution of the traditional materials used in the construction of the spearthrower by introduced

exotic materials, and the changes in form do not reflect a change or loss of primary function that are often evident in artefacts made for commercial purposes (Akerman 1969: 243, 250-251). What has been lost however, is the element of restraint or control, forced on the protagonists by the very fragility of the resin-spurred prototype.

It appears that the variations have occurred as individual expressions of a mental template or attribute list. Perhaps one could say that the gooseneck spearthrower template has, itself, been refined to its barest essentials, ignoring extraneous materials and traditional modes of construction. Thus the attributes of the contemporary template consists of the following.

- 1) A light thin rod shaft, that allows maximum rapid motion with minimum air resistance when swung. Flexibility of the shaft may also be of importance when casting the spear.
- 2) A spur or hook to engage the spear.
- 3) A stop at the proximal end to buttress the hand and ensure a firm grip.

How the above criteria are met is today immaterial. Experimentation, as evidenced by the variations discussed, has demonstrated that there are alternative possibilities to those manifest in the original template that suffice equally as well in fulfilling the original function of hurling short, sharp spears with considerable force at someone who is likewise engaged. With the adoption of the solid gooseneck spearthrower, there is increased likelihood of an engagement escalating, perhaps with more serious consequences than may have occurred with the resin spurred model. As such we are looking at an item of material culture that reflects a change in one aspect of the social mores relating to conflict that has occurred in some Aboriginal societies.

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